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 TI A process for manufacture of **fiber**-reinforced shaped articles
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 PA Dansk Eternit-Fabrik A/S, Den.
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CC 58-4 (Cement, Concrete, and Related Building Materials)

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| | CA 1319473 | A1 | 19930629 | CA 1988-585404 | 19881206 |
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CLASS

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AB The matrix-forming material of the title asbestos-free **fiber**-reinforced articles with d. .gtoreq.1000 kg/m3 comprises (A) a coarse material with av. particle size 12-35 .mu., preferably 18-25 .mu. with size distribution having only 1 max. and contg. a hydraulic binder and possible a SiO2- or silicate-contg., preferably pozzolanically active additive 40-90, preferably 45-85; (B) a fine inorg., preferably SiO2- or silicate-contg., esp. pozzolanically active additive with av. particle size 1-10 .mu., preferably 3-7 .mu. with particle size distribution having only 1 max. 5-45, preferably 10-40, in particular 10-35; (C) an ultrafine, preferably pozzolanically active additive with av. particle size 0.02-1 .mu., preferably <0.5 .mu. 3-25; and (D) other additives 0-30 dry wt.%. Green, shaped articles are formed by dewatering an aq. slurry of **fibers** and the matrix-forming material contg. excess water over the amt. necessary for curing the hydraulic binder in the matrix and contg. cellulose **fibers** 3-20, preferably 5-20, in particular 7-15 dry wt.% and the green articles are cured. Compns. suitable for dewatering on **Hatschek** and **Magnani** machines are claimed. Sheets prep'd. from a thick slurry of bleached cellulose **fibers** (length 1.0 mm, diam. .apprx.15 .mu.) 9, unbleached cellulose **fibers** (length <4 mm, diam. .apprx.35 .mu.) 3, low-alkali sulfate-resistant portland **cement** (90% <44 .mu. and 10% <3.2 .mu.) 47, ground fly ash (90% <30 .mu., 50% <5.4 .mu., and 10% <1.0 .mu.) 21, and SiO2 dust (av. particle diam. 0.1 .mu.) 20% had filtration time 103 s and with autoclaving temp. 160.degree. had modulus of rupture 20.3 MPa and d. 1399 kg/m3 vs. 41 s, 15.6 MPa, and 1284 kg/m3 with unground fly ash (90% <44 .mu., 50% <14 .mu., and 10% <4.4 .mu.) as fine component instead of ground fly ash.

ST fine ultrafine aggregate building material; cellulose **fiber**